

FILE

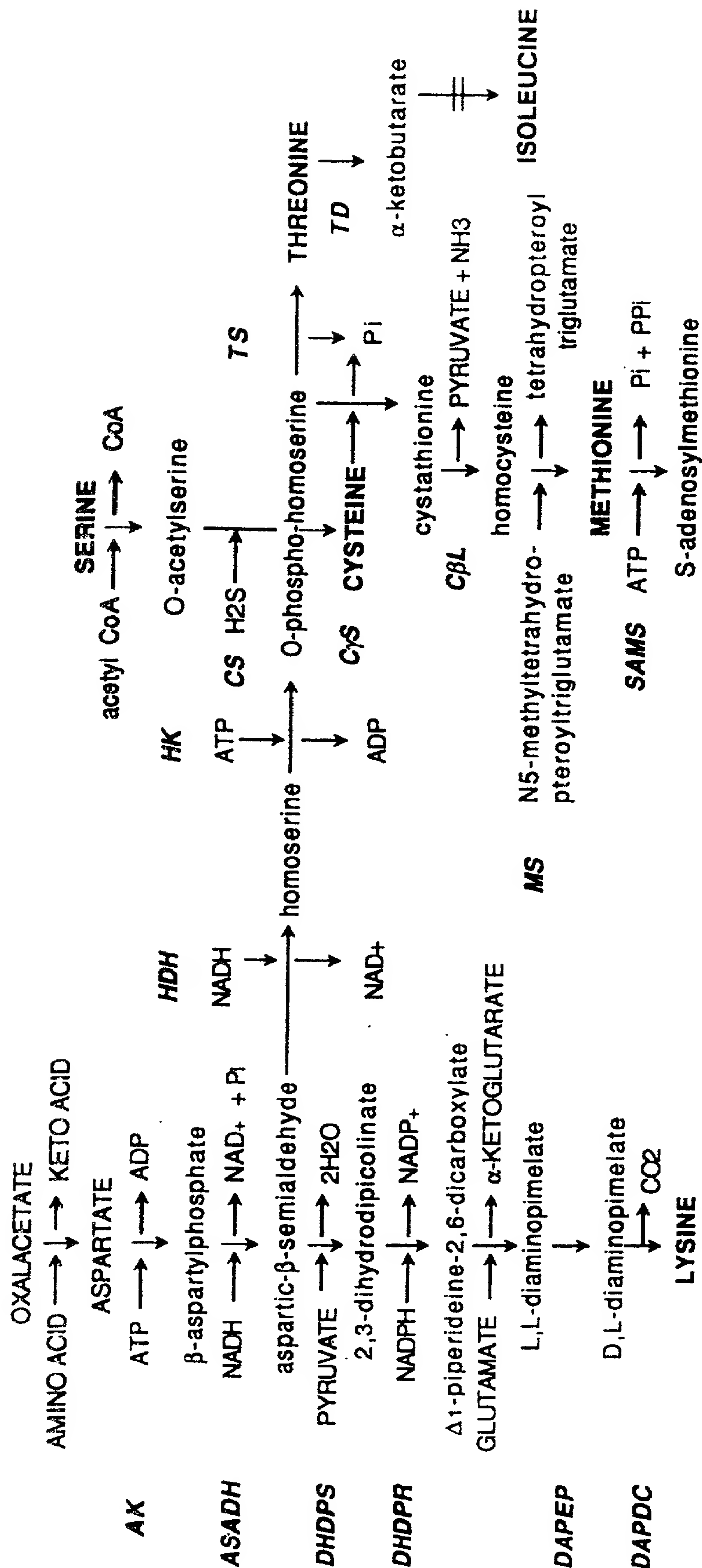


Figure 2A

SEQ ID NO: 7	MS-----RHL-----	* ** *****+*** *
SEQ ID NO: 52	MG-----Y-----	-----NVAIVGATGAVGETFLTV
SEQ ID NO: 43	-----	-----RVAIVGATGEVGRFTLKV
SEQ ID NO: 2	-----	-----
SEQ ID NO: 45	MQAAAAVHRPHLLGAYPGGRRRPSST--	-----VRMALREDGPSVAIVGATGAVGQEFFLRV
SEQ ID NO: 6	-MASLSVLRHNHLFSG-PLPARPKPTSSSSRIRMSLRENGPSIAVVGVTGAVGQEFFLSV	
SEQ ID NO: 49	-MASLSVLRHNHLFSG-PLPARPKPTSSSSRIRMSLRENGPSIAVVGVTGAVGQEFFLSV	
SEQ ID NO: 47	ARASLSVLRHNHLFSG-PLPARPKPTSSSSRIRMSLRENGPSIAVVGVTGAVGQEFFLSV	
SEQ ID NO: 4	-----	-----
SEQ ID NO: 51	MQAAAA-VHRPHLLAASPLGGRASRRPST--	-----VRMALREDGPSVAIVGATGAVGQEFFLRV

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SEQ ID NO: 7	* **++* *** **++* ** * **++* **	
SEQ ID NO: 52	LEERNFPIKSLYPLASSRSGKTVTFRDQELDVLDLA-EFDFSKVDLALFSAGGAVSKEY	
SEQ ID NO: 43	LEERNFPVDELVLAYSERSESGKVLTFKGKEYTVKALNKENSFKGIDIALFSAGGSTSKEW	
SEQ ID NO: 2	-----AVQDLAAPGAFDGVDIALFSAGGSVSRKY	
SEQ ID NO: 45	ISSRGFPYRSLRLLASERSAGKRLPFEGQYTVQDLAAPGAFDGVDIALFSAGGVSRAH	
SEQ ID NO: 6	LSDRDFPYRSIHMLASKRSAGRRITTFED--	
SEQ ID NO: 49	LSDRDFPYRSIHMLASKRSAGRRITTFEDRDYVVQELT-PESFDGVDIALFSAGGSIKHF	
SEQ ID NO: 47	LSDRDFPYRSIHMLASKRSAGRRITTFEDRDYVVQELT-PESFDGVDIALFSAGGSIKHF	
SEQ ID NO: 4	-----	
SEQ ID NO: 51	ITARDFPYRSLRLLASERSAGKRIDFEGRDYTVQDLAAPGAFDGVDIALFSAGGSIKHF	

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Figure 2D

SEQ ID NO: 7	VADNIRKGAATNAVQIAEILQREFLLKLSLPQ	++*+*****+**	****+*	*
SEQ ID NO: 52	VADNIRKGAATNAVQIAELLVKEGLI-----			
SEQ ID NO: 43	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 2	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 45	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 6	-----			
SEQ ID NO: 49	CGDQIRKGAALNAVQIAEML-----L--			
SEQ ID NO: 47	CGDQIRKGAALNAVQIAEML-----L--			
SEQ ID NO: 4	CGDQIRKGAALNAVQIAEML-----LK-			
SEQ ID NO: 51	CGDQIRKGAALNAVQIAEML-----LK-			

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Figure 4A

SEQ ID NO:60	MA-SLCFQSPSKPISYFQPKSNPSPPLFAKVSVFRCRASVQTLVAVEPEPVFVSVKTFAP	*
SEQ ID NO:29	M-----REIMKVRVKA--P	
SEQ ID NO:22	-----	
SEQ ID NO:24	-----	
SEQ ID NO:59	-----	
SEQ ID NO:26	MATSTCFLCPSTA-----SLKGRARF-RIRI-RCSSSVSVNIRREPEPVTTLVKAFAP	
SEQ ID NO:28	-----	
	1	60
SEQ ID NO:60	ATVANLGPGEFDFLG-CAVDGLGDHVTLRVDPSPVRAGEVSEITG-TTTLKLTNPLRNCA	+++ +*+ *++
SEQ ID NO:29	CTSANLGVGFDVFGLC---LKEPYDVIEVEAIDDKIIEVDD--KNIPTDPDKNVA	
SEQ ID NO:22	-----	
SEQ ID NO:24	-----	
SEQ ID NO:59	-----H	
SEQ ID NO:26	ATVANLGPGEFDFLG-CAVDGLGDIVSVKVDPPQVHPGEICISDISGHAPNKLKNPLWNCA	
SEQ ID NO:28	-----	
	61	120
SEQ ID NO:60	GIAAIAATMKMLGIRSVGLSLDLHKGLPLGSLGSSAASAAAATAVAVNEIFGRKLGSDQLV	++ + +*+ *
SEQ ID NO:29	GIVAKKMIDDFNI-GKGVKITIKKGVKAGSGLGSSAASSAGTAYAINELF--KLNLDKLLK	
SEQ ID NO:22	-----	
SEQ ID NO:24	-----VSIHLTKGLPLGSLGSSAASAAAATAVAVNEIFGRKLGSDQLV	
SEQ ID NO:59	EVAALRALDVKSHAVSIHLTKGLPLGSLGSSAASAAAATAVAVNEIFGRKLGSDQLV	
SEQ ID NO:26	GIAAIEVMKMLSIKSVGLSLSEKGLPLGSLGSSAASAAAATAVAVNEIFGRKLGSDQLV	
SEQ ID NO:28	-----	
	121	180

Figure 4B

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Figure 5A

SEQ ID NO: 66	M--ASFNNPLTSLCNTKSERNNLFKISL-----YEAQSLGFSKLNLSRKVAFPS	
SEQ ID NO: 32	M--AD-----AKST-----	
SEQ ID NO: 65	M--ASLVNNAYAAIRTSKLE-----LREVKNLNFR	
SEQ ID NO: 62	-----MASWSSPSAAANAAGARFGFPSPGGQRLAPCPSLVRG	
SEQ ID NO: 64	ARGSNYGTTPLSNTSEQRKMASWSSPVAA--AALQVHFGSSCFFSAR--SPRQTLLLPP	
SEQ ID NO: 31	M--AV-----ERSG-----	
	1	60
***** ** ** *		
SEQ ID NO: 66	VVCKAV-----SVPTKSS-----TEIEGLNIAEDVTQLIGNTPM	
SEQ ID NO: 32	-----IAKDVTELTIGNTPL	
SEQ ID NO: 65	VGPPSSLS-----CNNFKKVSSSPIT--CKAVSLSPSTIEGLNIAEDVSQLIKTKTPM	
SEQ ID NO: 62	PAPTLVLRHPDGRGHGLLAHTGPPSSR-CRAVA--AEVGGNLNANDVTQLIGNTPM	
SEQ ID NO: 64	LARNPTLTIQP--RPHPFNRNINSSSSSWMCHAVA--AEVEGLNIADDDVTQLIKTKTPM	
SEQ ID NO: 31	-----IAKDVTELTIGNTPL	
	61	120
***** * ** ***** ** * ** *		
SEQ ID NO: 66	VYLNNTIAKGCVANIAAKLEIMEPCCSVKDRIGFSMIVDAEEKGLISPGKTVLVEPTSGNT	
SEQ ID NO: 32	VYLNRVVDGCVARVAAKLEMMEPCCSVKDRIGYSMISDAENKGLITPGESVLIETSGNT	
SEQ ID NO: 65	VYLNNVSKGSVANIAAKLESMEPCCSVKDRIGYSMIDDAEQKGVITPGKTVLVEPTSGNT	
SEQ ID NO: 62	VYLNNVVKGSVANVAAKLEIMEPCCSVKDRIGYSMINDAEQKGLITPGKSVLVEATSGNT	
SEQ ID NO: 64	VYLNNTIVKGCVANVAAKLEIMEPCCSVKDRIGYSMISDAEEKGLITPGKSVLVEPTSGNT	
SEQ ID NO: 31	VYLNKLADGCVARVAAKLELMEPCCSVKDRIGYSMIADAEKGLITPGKSVLIEPTSGNT	
	121	180

Figure 5B

SEQ ID NO: 66	GIGLAFIAASRGYKLILTMPASMSLERRVILKAFGAELVLTDPAKGMKGAVSKAEIILNN	181
SEQ ID NO: 32	GIGLAFIAAAKGYRLIICMPASMSLERRTILRAFGAELVLTDPARGMKGAVQKAEEIKAK	
SEQ ID NO: 65	GIGLAFIAAARGYKILTMPASMSMERRVILKAFGAELVLTDPAKGMKGAVEKAEEILKK	
SEQ ID NO: 62	GIGLAFIAASKGYKLILTMPSSMSMERRVLLRAFGAELVLTDAAKGMKGALDKATEILNK	
SEQ ID NO: 64	GIGLAFIAASRGYKLILTMPASMSMERRVLLKAFGAELVLTDAAKGMKGAVDKATEILNK	
SEQ ID NO: 31	GIGLAFMAAARGYKLIIITMPASMSLERRIILLAFGAELVLTDPAKGMKGAVQKAEEILAK	240
SEQ ID NO: 66	TPDAYILQQFDNPANPKIHYEITGPEIWEDTKGKIDILVAGIGTGGTITGTGRFLKEQNP	241
SEQ ID NO: 32	TPNSYILQQFENPANPKIHYEITGPEIWRSGGKIDALVSGIGTGGTITGAGKYLKEQNP	
SEQ ID NO: 65	TPDSYMLQQFDNPANPKIHYEITGPEIWEDTKGKVDIFVAGIGTGGTISGVGRYLKERNP	
SEQ ID NO: 62	TPNSYMLQQFDNPANPQVHYETGPEIWEDSKGKVDIFIGIGTGGTISGAGRFLKEKNP	
SEQ ID NO: 64	TPDAYMLQQFDNPANPKVHYETGPEIWEDSKGKVDVFIGIGTGGTISGAGRFLKEKNP	
SEQ ID NO: 31	TPNAYILQQFENPANPKVHYETGPEIWKSGDKIDAFVSGIGTGGTITGAGKYLKEQNP	300
SEQ ID NO: 66	NIKIIGVEPTESNVLSGGKPGPHKIQQIGAGFIPGNLDQDVMDEVIIEISSDEAVETARTL	301
SEQ ID NO: 32	NIKLYGVEPVESAILSGGKPGPHKIQQIGAGFIPGVLDVNLDEVIQVSSEESIETAKLL	
SEQ ID NO: 65	GVQVIGIEPTESNILSGGKPGPHKIQGLGAGFVPSNLDLGVMDEVIIEISSDEAVEMAKQL	
SEQ ID NO: 62	GIKVIGIEPSESNILSGGKPGPHKIQQIGAGFVPRNLDSDILDEVIIEISSDEAVETAKQL	
SEQ ID NO: 64	GIKVIGIEPSESNILSGGKPGPHKIQQIGAGFVPRNLDSEVLDEVIIEISSDEAVETAKQL	
SEQ ID NO: 31	NIKLIGVEPVESVLSGGKPGPHKIQQIGAGFIPGVLEVNLLDEVVQISSDEAIEETAKLL	360

Figure 5C

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Figure 6A

SEQ ID NO: 41 MTSSLHLHSS-----FVPSFADLSDRGLISKNSPTSVISKVPTWEKKQISNR-N
SEQ ID NO: 34 -----
SEQ ID NO: 68 M-----AVAVPNAPGRLLFLLQSTPPFN-PSSASAARAQSF-RVPP-LRLSLFRRMA
SEQ ID NO: 36 -----
SEQ ID NO: 70 MSAAAAAIAIPTSLGRLFHLRPTPN--PSRNLGSSAQPLLRLSYHPRLTLRRME
SEQ ID NO: 38 MFSSAISQKPFLLQSLVIDR-YAQSTTAATRWEC LGFNKSENFSTKRVL-----RAE
SEQ ID NO: 40 -----
SEQ ID NO: 72 M-----AAA--AATRLFLHSSPPSLPCPNPSPSSAHTP-RPAY-PRLALAHRMA
1 60

SEQ ID NO: 41 SFKLNVCVMEKSVDGQTHSTVNNTT-DSLNTMNIKE-----EASVSTLLVNLNDNKFDPPFD
SEQ ID NO: 34 -----
SEQ ID NO: 68 GRSLTVIAGASGGSERDLSASAVSVEALDSVASDSD-LETKEPSVSTMLTSFENSFDKYG
SEQ ID NO: 36 -----
SEQ ID NO: 70 AP--AAIADSHGGG--DLSASAVGAELGAVAAPDFDVE MKEPSVATILTSFENSFDGFG
SEQ ID NO: 38 GFKLNCLVE-----NREMEVESSSLVDDAAMSLSEEDLGEP SISMVMNFESKFDPPFG
SEQ ID NO: 40 -----
SEQ ID NO: 72 AAP-AAIAGPSGDSERDLSASAVSLEALGAVESSGDGLERKEPSVATILTSFENSFDKYG
61 120

Figure 6B

SEQ	ID	NO: 41	*****	*	*****	*	*****	*	*****	*	*****	*
SEQ	ID	NO: 34	AMSTPLYQTATFKQPSAIENGPYDYTRSGNPTRDALLESLLAKLDKADRAFCFTSGMAALS									
SEQ	ID	NO: 68	-----									
SEQ	ID	NO: 36	ALSTPLYQTATFKQPSATDYGTYDYTRSGNPTRDVLQSLMAKLEKADQAFCTSGMAALA									
SEQ	ID	NO: 70	-----									
SEQ	ID	NO: 38	SMSTPLYQTATFKQPSATDNGPYDYTRSGNPTRDVLQSLMAKLEKADQAFCTSGMAALA									
SEQ	ID	NO: 40	AISTPLYQTATFKQPSAIENGPYDYTRSGNPTRDALLESLLAKLDKADRALCFTSGMAALS									
SEQ	ID	NO: 72	ALSTPLYQTATFKQPSATVNGAYDYTRSGNPTRDVLQSLMAKLEKADQAFCTSGMASLA									
			ALSTPLYQTATFKQPSATVNGAYDYTRSGNPTRDVLQSLMAKLEKADQAFCTSGMASLA									
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			180									

SEQ	ID	NO: 41	**	*	***	*	*****	**	*	*****	*	***	*	***
SEQ	ID	NO: 34	AVTHLIKNGEEIVAGDDVYGGSDRLLSQVVPVPRSGVVVKRVNTTKLDEVAAAIQPKTLVW											
SEQ	ID	NO: 68	-----											
SEQ	ID	NO: 36	AVKHLQAGQEI VAGED IYGGSDRLLSQVVPVPRNGI VVKRVDTTKI SDVVS AIGPSTRLVW											
SEQ	ID	NO: 70	AVTHLLKSGQEI VAGED IYGGSDRLLSQVAPRHGI VVKRIDTTKI SEVTS AIG-----											
SEQ	ID	NO: 38	AVTHLLKSGQEI VAGED IYGGSDRLLSQVAPRHGI VVKRIDTTKI SEVTS AIGPLTKLVW											
SEQ	ID	NO: 40	AVVRLVGTGEEI VTGDDVYGGSDRLLSQVVPRTGI VVKRVNTCDL DEVAA AIGLRTKLVW											
SEQ	ID	NO: 72	AVTHLLQAGQEI VAGED IYGGSDRLLSQVVPVPRNGI VVKRVDTTKI NDVTAAI GPLTRLVW											
			AVTHLLQAGQEI VAGED IYGGSDRLLSQVVPVPRNGI VVKRVDTTKI NDVTAAI GPLTRLVW											
			181											
			240											

Figure 6C

SEQ ID NO: 41 LESPTNPRQQISDIRKISEMAHAQQGALVLDNSIMSPVLSRPLELGADIVMHSATKFIAG
SEQ ID NO: 34 -----IAHSHGALVLDNSIMSPVLSRPIELGADIVMHSATKFIAG
SEQ ID NO: 68 LESPTNPRQQITDIKTISEIAHSHGALVLDNSIMSPVLSRPIELGADIVMHSATKFIAG
SEQ ID NO: 36 -----
SEQ ID NO: 70 LESPTNPRQLITDIKKIAEIAHYHGALVLDNSIMSPVLSRPLELGADIVMHSATKFIAG
SEQ ID NO: 38 LESPTNPRQLISDIRKISEMAHSHGALVLDNSIMSPVLSQPLELGADIVMHSATKFIAG
SEQ ID NO: 40 LESPTNPRQQITDIKKISEIAHSHGALVLDNSIMSPVLSWPIELGADIVMHSATKFIAG
SEQ ID NO: 72 LESPTNPRQQITDIKKISEIAHSHGALVLDNSIMSPVLSWPIELGADIVMHSATKFIAG

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SEQ ID NO: 41 HSDVMAGVLAVKGEK-LAKEVYFLQNSEGSLAPFDCWLCRLGIKTMALRIEKQQENARK
SEQ ID NO: 34 HSDLMAGILAVKGES-LAKEVGFLQNAEGSLAPFDCWLCRLGIKTMALRVEKQQANAQK
SEQ ID NO: 68 HSDLMAGILAVKGES-LAKEVGFLQNAEGSLAPFDCWLCRLGIKTMALRVEKQQANAQK
SEQ ID NO: 36 -----
SEQ ID NO: 70 HSDLMAGILAVKGESSLAKEIAFLQNAEGSLAPFDCWLCRLGIKTMALRVEKQQANAQK
SEQ ID NO: 38 HSDIMAGVLAVKGEK-LGKEMYFLQNAEGSLAPFDCWLCRLGIKTMALRIEKQQDNAQK
SEQ ID NO: 40 HSDLMAGILAVKGES-LAKEIAFLQNAEGSLAPFDCWLCRLGIKTMALRVEKQQDNAQK
SEQ ID NO: 72 HSDLMAGILAVKGES-LAKEIAFLQNAEGSLAPFDCWLCRLGIKTMALRVEKQQDNAQK

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